

ABSTRACT

FUEL NOZZLES

(Fig 5)

In order to achieve better fuel distribution despite an oversized fuel injector nozzle (6, 31, 60) relative to the impingement cross-section of an air flow (5, 25) directed towards that nozzle (6, 31, 60), an asymmetric distribution of fuel is provided. This asymmetric distribution is achieved by providing fuel distribution structures (42, 52, 53) about the injector nozzle (47, 51) which present varying amounts of fuel to the air flow (5, 25) dependent upon the localised flow pressure in the air flow presented to the nozzle (6, 31, 60). Such asymmetric distribution of fuel is achieved by providing passages (42) or jets (52, 53) of varying cross-section or distribution/spacing at different parts of the fuel injection nozzle (31, 60) dependent upon incident flow pressure. Thus, both parts of the injector nozzle (31, 60) directly impinged by the air flow generally present more fuel to that flow compared to depleted flow pressure zones of the air flow (5, 25).